

Remarks

Applicants respectfully request reconsideration of the rejection of the claims in view of the above amendments and the remarks set forth below. Claims 1, 3-14 and 16-20 remain in the application. Claims 1, 12 and 14 are amended. Claims 5, 17 and 18 were previously presented. Claims 3, 4, 6-11, 13, 16, 19 and 20 remain unchanged. Claims 2 and 15 are canceled.

35 U.S.C. §102

Claims 1, 4, 6, 14, 17 and 19 stand rejected under 35 U.S.C. §102(b) as being anticipated by Folkmer et al. (6,561,029). Under 35 U.S.C. § 102(b), for a reference to anticipate a claimed invention, each and every element of the claim must be found in the reference.

Amended claim 1 recites, inter alia, a “vibratory rotational rate sensor comprising...a vibratory element including a pair of vibratory masses disposed symmetrically along a common axis for vibration along the axis...a driver coupled to only one of the vibratory masses for inducing periodic *counter-phase motion* in the pair of vibratory masses along the axis...a first sense circuit coupled to one of the vibratory masses for sensing motion of the vibratory mass *in only one direction orthogonal to the vibratory axis*...and a second sense circuit *coupled to the same one of the vibratory masses* for sensing motion of the vibratory mass *in only another direction orthogonal to the vibratory axis*.” (Emphasis added). Support for the amendment to claim 1 is at least provided in applicants’ specification on pages 4, 5, and 8 and in FIGS. 8 and 9.

In contrast to amended claim 1, Folkmer appears to be directed at a rotational rate gyroscope that includes elements for decoupling primary and secondary oscillations. Folkmer appears to include a suspension arrangement that only allows excitation of a primary oscillator and a secondary oscillator in the same direction and phase (see, e.g., FIG. 5, col. 13, lines 64-67). Further, Folkmer appears to include a sensor that is used to sense motion in the same

direction as the axis of excitation or vibration (column 14 lines 1-5). Folkmer does not show “vibratory rotational rate sensor comprising...a vibratory element including a pair of vibratory masses disposed symmetrically along a common axis for vibration along the axis...a driver coupled to only one of the vibratory masses for inducing periodic counter-phase motion in the pair of vibratory masses along the axis...a first sense circuit coupled to one of the vibratory masses for sensing motion of the vibratory mass in only one direction orthogonal to the vibratory axis...and a second sense circuit coupled to the same one of the vibratory masses for sensing motion of the vibratory mass in only another direction orthogonal to the vibratory axis.” Since amended claim 1 contains elements not found in Folkmer, it is respectfully proposed that the rejection for anticipation is overcome.

Claims 4 and 6 depend from amended claim 1 or depend from claims depending from amended claim 1, and should therefore also be allowable for the same reasons, as well as for the additional recitation contained therein. Applicants respectfully requests reconsideration of the rejection of the claims in view of the above remarks.

Independent claim 14 is amended to include elements similar to the elements of amended independent claim 1 and should therefore be allowable for the same reasons discussed above as well as for the additional recitations contained therein. Therefore, it is respectfully proposed that the rejection for anticipation is overcome.

Claims 17 and 19 depend from amended claim 14 or depend from claims depending from amended claim 14, and should therefore also be allowable for the same reasons, as well as for the additional recitation contained therein. Applicants respectfully requests reconsideration of the rejection of the claims in view of the above remarks.

Claims 1, 2, 6, 14, 15 and 19 stand rejected under 35 U.S.C. §102(b) as being anticipated by Peters (4,512,192) in view of Merhav (4,590,801). Under 35 U.S.C. § 102(b),

for a reference to anticipate a claimed invention, each and every element of the claim must be found in the reference.

As discussed above, amended claim 1 recites, *inter alia*, a “vibratory rotational rate sensor comprising...a vibratory element including a pair of vibratory masses disposed symmetrically along a common axis for vibration along the axis...a driver coupled to only one of the vibratory masses for inducing periodic *counter-phase motion* in the pair of vibratory masses along the axis...a first sense circuit coupled to one of the vibratory masses for sensing motion of the vibratory mass *in only one direction orthogonal to the vibratory axis*...and a second sense circuit *coupled to the same one of the vibratory masses* for sensing motion of the vibratory mass *in only another direction orthogonal to the vibratory axis.*” (Emphasis added).

In contrast to amended claim 1, Peters in view of Merhav appears to be direct towards a two axis angular rate and specific force sensor using vibrating accelerometers (10, 12) acting as vibratory masses that are connected to the outer faces of two prongs (20a, 20b) of a tuning fork (20). Each of the accelerometers (10 or 12) only appears to sense the motion of the prong (20a or 20b) to which the accelerometer is attached. (FIG. 2; Column 3, lines 43 to 63). Peters does not show the “vibratory rotational rate sensor comprising...a vibratory element including a pair of vibratory masses disposed symmetrically along a common axis for vibration along the axis...a driver coupled to only one of the vibratory masses for inducing periodic counter-phase motion in the pair of vibratory masses along the axis...a first sense circuit coupled to one of the vibratory masses for sensing motion of the vibratory mass *in only one direction orthogonal to the vibratory axis*...and a second sense circuit *coupled to the same one of the vibratory masses* for sensing motion of the vibratory mass *in only another direction orthogonal to the vibratory axis.*” elements of amended claim 1. Since amended claim 1 contains elements not found in Peters, it is respectfully proposed that the rejection for anticipation is overcome.

Claim 6 depends from claims depending from amended claim 1, and should therefore also be allowable for the same reasons, as well as for the additional recitation contained therein. Applicants respectfully requests reconsideration of the rejection of the claims in view of the above remarks.

Independent claim 14 is amended to include elements similar to the elements of amended independent claim 1 and should therefore be allowable for the same reasons discussed above as well as for the additional recitations contained therein. Therefore, it is respectfully proposed that the rejection for anticipation is overcome.

Claim 19 depends from claims depending from amended claim 14, and should therefore also be allowable for the same reasons, as well as for the additional recitation contained therein. Applicants respectfully requests reconsideration of the rejection of the claims in view of the above remarks.

### **35 U.S.C. §103**

Claims 3, 7, 12, 16 and 20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Peters in view of Merhav. Claims 3, 7 and 12 depend from amended claim 1 or depend from claims depending from amended claim 1, and should therefore also be allowable for the same reasons, as well as for the additional recitation contained therein. Claims 16 and 20 depend from amended claim 14 or depend from claims depending from amended claim 14, and should therefore also be allowable for the same reasons, as well as for the additional recitation contained therein. Applicants respectfully requests reconsideration of the rejection of the claims in view of the above remarks.

Claims 8-11 and 13 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Peters in view of Merhav and further in view of Lutz (5,604,312). Claims 8-11 and 13 depend from amended claim 1 or depend from claims depending from amended claim 1, and should therefore also be allowable for the same reasons, as well as for the additional recitation

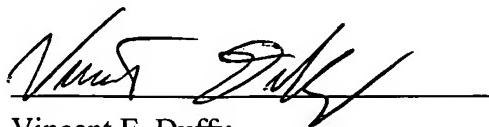
contained therein. Applicants respectfully requests reconsideration of the rejection of the claims in view of the above remarks.

Claims 5 and 18 stand rejected under 35 U.S.C. §103(a) as being unpatentable over either Folkmer et al. or Peters and further in view of Varnham et al. (5,226,321). Claim 5 depends from amended claim 1 or depends from claims depending from amended claim 1, and should therefore also be allowable for the same reasons, as well as for the additional recitation contained therein. Claims 18 depends from amended claim 14 or depends from claims depending from amended claim 14, and should therefore also be allowable for the same reasons, as well as for the additional recitation contained therein. Applicants respectfully requests reconsideration of the rejection of the claims in view of the above remarks.

Having fully addressed the Examiner's rejections it is believed that, in view of the preceding amendments and remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicants' attorney at (818) 480-5223, so that a mutually convenient date and time for a telephonic interview may be scheduled.

No fees, other than those discussed above, are believed due. However, if a fee is due, please charge the additional fee to Deposit Account 07-0832.

Respectfully submitted,



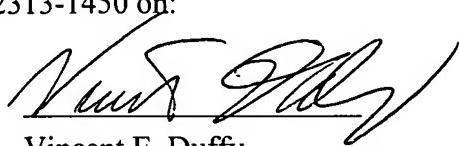
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Vincent E. Duffy

